

REMARKS

Claims 42, 43, 45 – 52, and 54 – 58 are presented for reconsideration and further examination in view of the foregoing amendments and following remarks. Claims 1 – 41 are withdrawn, and claims 44 and 53 were previously cancelled without prejudice or disclaimer.

In the outstanding Office Action, the Examiner:

- withdrew all previous grounds of rejection, which Applicants note with appreciation;
- rejected claims 42, 43, 45 – 52, 54, 55, and 58 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,517,021 to Kaufman et al. (hereinafter referred to as “Kaufman”); and
- rejected claims 56 and 57 under 35 U.S.C. 103(a) as being unpatentable over Kaufman in view of U.S. Patent No. 6,629,935 to Miller et al (hereinafter referred to as “Miller.”)

In response, Applicants

- amend claim 42 in a manner believed to render it, and all other pending claims dependent therefrom, allowable over the cited art of record; and
- traverse the Examiner’s rejections.

No new matter has been added to this application by the above amendments. Support for the amendments to claim 42 may be found in the original specification, including *inter alia* on pages 6 and 7, “Summary of the Invention” (“Upon detecting faulty data, new data will be generated until fault-free data is obtained or until it is determined that conditions will not yield reliable data”) and pages 10 – 13, which reference Figure 3 (“At step 111, there is a determination as to whether or not any data error has been *previously noted or recorded*...If there has been a data error recorded, the process will proceed to step 112 to determine if a predetermined maximum number of data points

have been generated. *If the maximum has been reached, it is an indication that the conditions for acquiring satisfactory error-free VEP signal data is just not achievable at this time...*"; emphasis added)

Rejections under 35 U.S.C. 102

In the outstanding Office Action, the Examiner rejected claims 42, 43, 45 – 52, 54, 55, and 58 under 35 U.S.C. 102(b) as being anticipated by Kaufman, and rejected claims 56 and 57 under 35 U.S.C. 103(a) as being unpatentable over Kaufman in view of Miller.

RESPONSE

For a reference to anticipate an invention, all of the elements of that invention must be present in the reference. The test for anticipation under section 102 is whether each and every element as set forth in the Claim is found, either expressly or inherently, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); MPEP §2131. The identical invention must be shown in as complete detail as is contained in the Claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989); MPEP §2131.

By this Response and Amendment, Applicants respectfully traverse the Examiner's rejection since the cited prior art does not disclose, teach or suggest all of the features of independent Claim 42 as amended, and thus of all claims remaining in the application dependent therefrom.

Applicants respectfully submit that the Examiner has failed to locate each and every claimed feature in the cited art.

A computer processor programmed to stop a collection of data after the recording of a predetermined number of faults

Claim 42 has been amended to recite *inter alia* a “computer processor ... *programmed to stop a collection of data after the recording of a predetermined number of faults* and programmed to stop the collection of data after receiving an indication that the data collected is reliable.” (emphasis added)

The Examiner cited column 3, lines 4 – 7 and column 12, lines 43 – 61 of Kauffman as disclosing this feature (before entry of the above amendments). These passages explain that the system of Kauffman “automatically disengages when it senses non-interaction episodes, e.g. turning to look at someone who enters the room. The system then allows re-engagement when the user generates the appropriate commands” such as “fixating on the cursor and winking twice.”

As amended, Applicants respectfully submit that the features of amended Claim 42 are not disclosed in Kauffman. Kauffman is directed to a system in which data collection is stopped immediately when non-interaction is sensed. In contradistinction, the present claim amendments make it clear that the claimed processor stops the collection of data not immediately when a fault is first observed, but *when a predetermined number of faults have been recorded*. This difference allows for clear advantages in data collection, whereby a tolerable amount of faulty data may be recorded but collection may be stopped *when the data record shows* that too many faults have occurred.

See, for example, pages 6 and 7 of the present application specification, which make it clear that “[u]pon detecting faulty data, *new data will be generated* until fault-free data is obtained or until it is determined that conditions will not yield reliable data.” This is in direct opposition to the style

of fault management to which Kauffman is drawn, in which data generation stops *immediately* when a fault is observed.

Thus, as Kauffman does not disclose, teach, or suggest a “computer processor ... programmed to stop a collection of data after the recording of a predetermined number of faults” as recited in independent claim 42, Kauffman does not anticipate claim 42, nor any claim dependent therefrom.

Evoked Brain Potentials

Claim 42 of the present application recites, *inter alia*, “means for detecting electrical signals representative of [a] patient’s *evoked brain potentials*.” (emphasis added)

Applicants traverse the Examiner’s identification of electrode elements 20-30, 60-64, and 102 as anticipating the feature.

As previously noted in the responses of August 13, 2007 and November 15, 2007, Kauffman is drawn to an “eye-tracking interface system.” As clearly recited in the abstract, the system “includes a detecting device *adapted to detect bio-electromagnetic signals generated by eye movements*.” (emphasis added) That is, Kauffman detects electrical signals corresponding to eye movements, and not to brain activity. Kauffman makes no reference to *any* electromagnetic signals except those generated by the eyes themselves. Electrode elements 20 – 30, 60 – 64, and 102 detect only eye movements, and not signals representative of brain potentials (see, e.g., col. 6 lines 19 – 26).

Further, Applicants respectfully submit that it would not be obvious to use the system of Kauffman for detecting electrical signals corresponding to brain activity, at least for the reason that electrical signals corresponding to brain activity are always weaker than those generated by eye

movements, and thus require more sensitive equipment and a different electrode placement, to be received.

Applicants note with concern that the above distinction, between Kauffman's eye-tracking system and the applicants' system for detecting brain potentials, was presented in the responses of August 13, 2007 and November 15, 2007, but has thus far been ignored by the Examiner in the provided Office Actions.

As Kauffman does not disclose, teach, or suggest "means for detecting electrical signals representative of [a] patient's *evoked brain potentials*," as recited in independent claim 42, Kauffman does not anticipate claim 42, nor any claim dependent therefrom.

Electrode...over a visual cortex of a patient

Further, Claim 42 recites, *inter alia*, "at least one electrode...configured to be placed over a visual cortex of a patient."

Applicants traverse the Examiner's identification of electrode elements 20-30, 60-64, and 102, as shown in Figures 2, 3, and 5, as anticipating this feature. **The visual cortex is an area of the occipital lobe of the brain associated with vision, and the occipital lobe is located at the back of the head.** None of figures 2, 3, or 5 show an electrode placed at the back of the head, and again, none of electrode elements 20-30, 60-64, and 102 are said to detect any brain signals whatsoever, let alone brain signals measured over the visual cortex of a patient.

Thus, as Kauffman does not disclose, teach, or suggest "means for detecting electrical signals representative of [a] patient's *evoked brain potentials*," as recited in independent claim 42, Kauffman does not anticipate claim 42, nor any claim dependent therefrom.

Signals representative of ... evoked brain potentials

Still further, Claim 42 recites, *inter alia*, “electrical *signals* representative of [a] patient’s evoked brain potentials,” “means for amplifying *said signals*,” and “means for converting *said signals* into digitized data.” (Emphasis added)

Applicants traverse the Examiner’s identification of element 68 as “means for amplifying *said signals*” and element 78 as “means for converting *said signals* into digitized data.” As noted above Kauffman does not disclose, teach, or suggest any signals representative of brain potentials whatsoever. Accordingly, element 68 of Kauffman does not amplify any signals representative of brain potentials, and element 78 does not digitize any signals representative of brain potentials.

It appears that the Examiner is taking Official Notice that some amplifier or digitizer in Kauffman, which would be used solely for amplifying and digitizing signals corresponding to eye movement, could be used to amplify or digitize signals corresponding to brain potentials.

If such notice is taken, the basis for such reasoning must be set forth explicitly. The examiner must provide specific factual findings predicated on sound technical and scientific reasoning to support his or her conclusion of common knowledge. See *Soli*, 317 F.2d at 946, 37 USPQ at 801; *Chevenard*, 139 F.2d at 713, 60 USPQ at 241. The applicants should be presented with the explicit basis on which the examiner regards the matter as subject to official notice and be allowed to challenge the assertion in the next reply after the Office action in which the common knowledge statement was made.

Thus, as Kauffman does not disclose, teach, or suggest means for amplifying or converting electrical signals “representative of [a] patient’s *evoked brain potentials*,” as recited in independent claim 42, Kauffman does not anticipate claim 42, nor any claim dependent therefrom.

Means for recording each occurrence of data being outside of predetermined ranges

Still further, Claim 42 recites, *inter alia*, a “means for recording” which “*records each occurrence* of data being outside of predetermined ranges.” (emphasis added)

Applicants traverse the Examiner’s identification of data bus element 80 as such an element. The Examiner cites column 6, lines 38 – 44 and 58 – 61 as disclosing this claimed feature. Applicants have carefully reviewed column 6, lines 38 – 44 and 58 – 61, and submit that these passages are directed only to “filtering and noise removal,” and not to the *recording* of any occurrences of data being outside of predetermined ranges. **The Examiner has not identified any passage in Kauffman disclosing that an occurrence of data being outside of a predetermined range is recorded in any way.**

Thus, as Kauffman does not disclose, teach, or suggest a “means for recording” which “records each occurrence of data being outside of predetermined ranges” as recited in independent claim 42, Kauffman does not anticipate claim 42, nor any claim dependent therefrom.

CONCLUSION

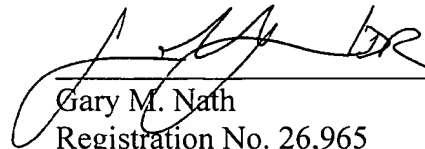
In light of the foregoing, Applicants submit that the application is now in condition for allowance. If the Examiner believes the application is not in condition for allowance, Applicants respectfully request that the Examiner contact the undersigned attorney if it is believed that such contact will expedite the prosecution of the application.

In the event this paper is not timely filed, Applicants petition for an appropriate extension of time. Please charge any fee deficiency or credit any overpayment to Deposit Account No. 14-0112.

Respectfully submitted,
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